HN

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,773	11/30/2001	Jon Loyens	021604.0119 (T00088)	6608

33438 7590 04/20/2005

HAMILTON & TERRILE, LLP
P.O. BOX 203518
AUSTIN, TX 78720

EXAMINER	
HAILU, TADESSE	
ART UNIT	**PAPER NUMBER**
2173	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/997,773	LOYENS ET AL.	
	Examiner	Art Unit	
	Tadesse Hailu	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the AMENDMENT submitted on January 18, 2005 for the patent application number 09/997,773 filed November 30, 2001.

Drawings

1. The Drawing correction submitted on January 18, 2005 are considered and entered into the File.

Specification

2. The amendment made to the Specification submitted January 18, 2005 is considered and entered into the File.

Information Disclosure Statement

3. The Information Disclosure statement submitted on January 18, 2005 is considered and entered into the File.

Claim Objections

4. The correction to Claim 10 submitted on January 18, 2005 is considered and entered into the File.

Status of the claims

5. The pending claims 1-47 are examined herein as follows.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 4, 6, 11, 17, 18, 19, 22-34, 37-39, 41-45, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guerrero (US Pat No 6,236,400) in view of Chaudhuri et al (US Pat No 6,212,526).

The present invention, Guerrero and Chaudhuri are directed to the same invention that is to a system and method for presenting information organized by hierarchical levels through the computer user interface. Likewise Guerrero and Chaudhuri render the present invention obvious as follows.

With regard to claim 1:

Guerrero discloses a user interface (vertical browser, **502,** Figs. 5, and 6A-F) for displaying information organized with multiple hierarchy levels (column 6, lines 27-46).

The user interface (vertical browser) further includes a root node navigation bar (**608A,** Figs. 6A, 6B, 6D, and 6E) representing the root hierarchy level (column 7, lines 18-25).

The user interface also includes multiple sub-node navigation bars (**608B, 608C,** Fig. 6B) stacked below the root node navigation bar, each sub-node navigation bar representing a sub-node from a selected level of the multiple hierarchy levels (column 8, lines 12-21;

Furthermore, Guerrero describes that hierarchical information is displayed efficiently such that information that is no longer needed is not displayed (column 3, lines 38-47). The vertical browser displays the user's traveled path, that is the user navigation path from the root node level to the one or more sub-nodes or sub levels

(e.g., selected paths from *Root node (/) to Pipeplus, Pmail, and Resource* are shown) (Fig. 6C). During the navigation and selection of the hierarchical tree (with a plurality of sub-node), the vertical browser only displays the traveled paths (or selected sub-nodes) excluding or removing all irrelevant sub-nodes, such as hiding all siblings of selected sub-nodes throughout the navigation (from root toward the lowest selected level) (column 3, lines 48-column 4, lines 29, column 8, lines 5-52, Figs. 6A-E).

In one embodiment, Guerrero describes that the vertical browser is described with reference to displaying hierarchical file system. In another embodiment, Guerrero describes that his invention is implemented in an object-oriented programming environment. In the later embodiment, Guerrero describes a hierarchy of classes of information. But Guerrero does not clearly describe a database hierarchy representations wherein *multiple sub-nodes represent database classifiers of database objects and a plurality sub-nodes in the multiple hierarchy levels represent the same database classifier representing the same database object* as claimed in claim 1.

However, Chaudhuri discloses method and apparatus for the construction of a classification model from data in a large database. Chaudhuri is concerned in building classification models (also called classifiers) from a large database having records stored on a mass storage device (database system) (Abstract, column 1, lines 7-9). As illustrated in Fig. 3B, for example, a decision tree classifiers are disclosed, wherein the root node 112 of FIG. 3B splits between the three attribute values of 'Electronics', "Shoes', and 'Misc'. Each of the three child nodes 113, 114, 115 are sub-nodes,

representing database classifiers of database objects in the hierarchy levels (Fig. 3B, Abstract, column 7, lines 14-35, column 10, lines 44-63).

Chaudhuri and Guerrero are analogous art because they are from the same field of endeavor, organizing and representing information in a hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a display of relational database tree structures as illustrated in Fig. 3B of Chaudhuri in place of hierarchical file system display of Guerrero because Guerrero suggests that his invention can be used to display any type of hierarchical information (Guerrero, col. 6, lines 38-46). Furthermore classifier (i.e., database classifier) is an effective means to visualize data as suggested by Chaudhuri, col 3, lines 32-35).

Therefore, it would have been obvious to combine Chaudhuri with Guerrero to obtain the invention as specified in claim 1.

With regard to claim 2:

Guerrero in view of Chaudhuri further discloses that the user interface (vertical browser 502) further includes information associated with a sub-node (e.g., *Pipeplus, Pmail* and *Resource)*, the sub-node having the lowest selected hierarchy level. For example, as illustrated in Figs. 6A, 6B and 6C, the choices list **506** includes information associated with *Pipeplus, Pmail* and *Resource,* respectively (column 8, lines 5-63).

With regard to claim 4:

As illustrated in Figs. 6A-E, Guerrero in view of Chaudhuri further discloses that one or more of the navigation bars is operable to select display of labels for nodes from

the root node to sub-nodes having a hierarchy level one level lower than the node associated with the selected navigation bar (column 7, lines 18-44, column 8, lines 5-52).

With regard to claim 6:

As illustrated in Figs. 5, and 6A-E, Guerrero in view of Chaudhuri discloses a vertical browser user interface.

With regard to claim 11:

As illustrated in Fig. 7A-B, Guerrero discloses a method for presenting information organized by hierarchy levels (also illustrated in Figs. 6A-E).

The method also includes displaying a first hierarchy level having a first hierarchy label (Root node (/), Fig. 6A).

The method also includes displaying a second hierarchy level having multiple second hierarchy labels (*Pipeplus, Pmail,* and *Resource*, Figs. 6C).

The method also includes activating one of the second hierarchy labels (column 9, lines 12-23).

The method also includes displaying information associated with the activated Label. For example, as illustrated in Figs. 6A, 6B and 6C, the choices list **506** includes information associated with *Pipeplus, Pmail* and *Resource,* respectively (column 8, lines 5-63).

The method further includes hiding display of activated second hierarchy labels (column 3, lines 48-column 4, lines 29, column 8, lines 5-52, Figs. 6A-E).

But Guerrero does not clearly describe a database hierarchy representations wherein multiple database classifier labels represent database objects and a plurality database classifier labels in multiple hierarchy branches are the same database classifier label representing the same database object as claimed in claim 11.

However, Chaudhuri discloses method and apparatus for the construction of a classification model from data in a large database. Chaudhuri is concerned in building classification models (also called classifiers) from a large database having records stored on a mass storage device (database system) (Abstract, column 1, lines 7-9). As illustrated in Fig. 3B, for example, a decision tree classifiers are disclosed, wherein the root node 112 of FIG. 3B splits between the three attribute values with labels of 'Electronics', "Shoes', and 'Misc'. Each of the three child nodes or branches 113, 114, 115 are sub-nodes, representing database classifiers of database objects in the hierarchy levels (Fig. 3B, Abstract, column 7, lines 14-35, column 10, lines 44-63).

Chaudhuri and Guerrero are analogous art because they are from the same field of endeavor, organizing and representing information in a hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a display of relational database tree structures as illustrated in Fig. 3B of Chaudhuri in place of hierarchical file system display of Guerrero because Guerrero suggests that his invention can be used to display any type of hierarchical information (Guerrero, col. 6, lines 38-46). Furthermore classifier (i.e., database classifier) is an effective means to visualize data as suggested by Chaudhuri, col 3, lines 32-35).

Therefore, it would have been obvious to combine Chaudhuri with Guerrero to obtain the invention as specified in claim 11.

With regard to claim 17:

As illustrated in Figs. 6A-E, Guerrero in view of Chaudhuri discloses the navigational bars (610A-F) are placed one bar on top of the other bar as a stacked box metaphor.

With regard to claim 18:

Guerrero discloses a file system (database) that allows a user to categorize or group files. For example, Fig. 1 provides an example of a non-homogeneous hierarchical file structure 102 that groups files into directories. Root 104 includes documents directory 106, applications directory 107, system directory 108 and root-level files 105 (column 1, lines 11-34).

Guerrero further discloses a vertical browser that is used to display hierarchical information (column 6, lines 39-46).

As illustrated in Fig. 4, Guerrero discloses a computer system including a CPU 413 (control) interfaced with a mass storage 412 (database) and the CRT 417 (display). The system generates interface (vertical browser) for presentation on the display (Figs. 6A-E).

The browser 502 includes a path list 504 that initially displays the root level of the file system hierarchy and choices list 506 that displays the root level's children. Furthermore, Guerrero describes that hierarchical information is displayed efficiently such that information that is no longer needed is not displayed (column 3, lines 38-47).

As a choice is selected from choices list 506, it is added to path list 504 and the children of the choice are displayed in choices list 506. The browser further operable to hide child nodes of a selected node that is not relevant to the selected node having the lowest hierarchy level. As illustrated in FIGS. 6A-6D, only the selected path are displayed in the path list 504 the child nodes of the selected node are hidden form display.

But Guerrero does not clearly describe a database hierarchy representations wherein *multiple sub-nodes represent database classifiers of database objects and a plurality sub-nodes in the multiple hierarchy levels represent the same database classifier representing the same database object* as claimed in claim 18.

However, Chaudhuri discloses method and apparatus for the construction of a classification model from data in a large database. Chaudhuri is concerned in building classification models (also called classifiers) from a large database having records stored on a mass storage device (database system) (Abstract, column 1, lines 7-9). As illustrated in Fig. 3B, for example, a decision tree classifiers are disclosed, wherein the root node 112 of FIG. 3B splits between the three attribute values of 'Electronics', "Shoes', and 'Misc'. Each of the three child nodes 113, 114, 115 are sub-nodes, representing database classifiers of database objects in the hierarchy levels (Fig. 3B, Abstract, column 7, lines 14-35, column 10, lines 44-63).

Chaudhuri and Guerrero are analogous art because they are from the same field of endeavor, organizing and representing information in a hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a display of relational database tree structures as illustrated in Fig. 3B of Chaudhuri in place of hierarchical file system display of Guerrero because Guerrero suggests that his invention can be used to display any type of hierarchical information (Guerrero, col. 6, lines 38-46). Furthermore classifier (i.e., database classifier) is an effective means to visualize data as suggested by Chaudhuri, col 3, lines 32-35).

Therefore, it would have been obvious to combine Chaudhuri with Guerrero to obtain the invention as specified in claim 18.

With regard to claim 19:

Guerrero in view of Chaudhuri further discloses that the vertical browser (user Interface) further having predetermined information (see Figs. 6A-E) stacked below the sub-node having the lowest hierarchy Level (Figs. 6A-E), the predetermined information associated with the sub-node having the lowest hierarchy level (column 8, lines 22-52).

With regard to claim 22:

Guerrero discloses a program product for displaying hierarchy levels that organize information with multiple nodes (Figs. 6A-E).

Guerrero further discloses a storage medium (Fig. 4, 412) that stores computer readable instructions (column 1, lines 12-21).

Guerrero further discloses instructions (process flow of Figs 7A-B) stored on the storage medium, the instructions operable to command a computer to display selected nodes from first, second or third hierarchy levels (column 9, lines 1-67), the instructions

selecting for display the nodes of the first and second hierarchy levels display only the nodes of the first and second hierarchy levels on a traversed path to the third hierarchy level (column 8, lines 53-63, column 9, lines 1-67),

But Guerrero does not clearly describe a database hierarchy representations wherein *multiple nodes represent database classifiers of database objects and a plurality nodes in the multiple hierarchy levels represent the same database classifier representing the same database object* as claimed in claim 22.

However, Chaudhuri discloses method and apparatus for the construction of a classification model from data in a large database. Chaudhuri is concerned in building classification models (also called classifiers) from a large database having records stored on a mass storage device (database system) (Abstract, column 1, lines 7-9). As illustrated in Fig. 3B, for example, a decision tree classifiers are disclosed, wherein the root node 112 of FIG. 3B splits between the three attribute values of 'Electronics', "Shoes', and 'Misc'. Each of the three child nodes 113, 114, 115 are sub-nodes, representing database classifiers of database objects in the hierarchy levels (Fig. 3B, Abstract, column 7, lines 14-35, column 10, lines 44-63).

Chaudhuri and Guerrero are analogous art because they are from the same field of endeavor, organizing and representing information in a hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a display of relational database tree structures as illustrated in Fig. 3B of Chaudhuri in place of hierarchical file system display of Guerrero because Guerrero suggests that his invention can be used to display any type of hierarchical

information (Guerrero, col. 6, lines 38-46). Furthermore classifier (i.e., database classifier) is an effective means to visualize data as suggested by Chaudhuri, col 3, lines 32-35).

Therefore, it would have been obvious to combine Chaudhuri with Guerrero to obtain the invention as specified in claim 22.

With regard to claim 23:

Guerrero in view of Chaudhuri further discloses that the first hierarchy level comprises the root node (see Fig. 4, column 7, lines 10-16).

With regard to claim 24:

Guerrero in view of Chaudhuri further discloses that the second hierarchy level comprises multiple nodes (see Figs. 4, and 6A-E), the instructions commanding the computer to display the one of the multiple nodes of the second hierarchy level on the traversed path to the third hierarchy level and to hide the sibling nodes of the displayed node (column 3, lines 38-47, column 8, lines 53-63).

With regard to claim 25:

Guerrero in view of Chaudhuri further discloses that the third hierarchy level comprises information associated with a selected one of the nodes of the second hierarchy level. For example, the transition from Fig. 6A to Fig. 6B illustrates that the third hierarchy level, *Pmail* comprises information associated with a selected one of the nodes *(see Fig. 6A)* of the second hierarchy level, which is *Pipeplus.*

With regard to claim 26:

Guerrero in view of Chaudhuri further discloses comprising multiple indices that organize the information of the third hierarchy level according to one or more attributes. As shown in Fig. 6C, 610A-E are multiple choices list or indices that organize the information of the third hierarchy level according to one or more attributes (such as file type).

With regard to claim 27:

Guerrero in view of Chaudhuri further discloses the third hierarchy level (e.g., Resource, Fig. 6C) comprises multiple nodes (e.g., rescom, rquotes.r, winpmdde, etc), the instructions further operable to accept a selection of one of the multiple nodes (see highlighted rquotes.r in choices list 506) of the third hierarchy level and to hide or remove the sibling nodes (e.g., rescom, winpmdde, etc) of the selected third hierarchy level node (column 3, lines 38-47, column 8, lines 22-63).

With regard to claim 28:

Guerrero discloses an electronic display of data (vertical browser 502); the electronic display includes among other things a visual representation of a tree data structure having a root node (Fig. 6B, 608A) and multiple descendant nodes (Fig. 6B, 60bB-C); and Guerrero further discloses a visual representation of an index of data associated with a selected descendant node (Fig. 6B, 610B) (column 8, lines 12-21). Guerrero further discloses that the visual representation of the tree data structure displays the descendant nodes on the traversed path from the root node to the selected descendent node and conceals siblings of the descendant nodes on the traversed path (column 3, lines 48-column 4, lines 29, column 8, lines 5-52, Figs. 6A-E).

But Guerrero does not clearly describe a database hierarchy representations wherein *multiple descendent nodes represent database classifiers of database objects and a plurality descendant nodes in the multiple hierarchy levels represent the same database classifier representing the same database object* as claimed in claim 28.

However, Chaudhuri discloses method and apparatus for the construction of a classification model from data in a large database. Chaudhuri is concerned in building classification models (also called classifiers) from a large database having records stored on a mass storage device (database system) (Abstract, column 1, lines 7-9). As illustrated in Fig. 3B, for example, a decision tree classifiers are disclosed, wherein the root node 112 of FIG. 3B splits between the three attribute values of 'Electronics', "Shoes', and 'Misc'. Each of the three child nodes 113, 114, 115 are also descendant or sub-nodes, representing database classifiers of database objects in the hierarchy levels (Fig. 3B, Abstract, column 7, lines 14-35, column 10, lines 44-63).

Chaudhuri and Guerrero are analogous art because they are from the same field of endeavor, organizing and representing information in a hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a display of relational database tree structures as illustrated in Fig. 3B of Chaudhuri in place of hierarchical file system display of Guerrero because Guerrero suggests that his invention can be used to display any type of hierarchical information (Guerrero, col. 6, lines 38-46). Furthermore classifier (i.e., database classifier) is an effective means to visualize data as suggested by Chaudhuri, col 3, lines 32-35).

Therefore, it would have been obvious to combine Chaudhuri with Guerrero to obtain the invention as specified in claim 28.

With regard to claim 29:

Guerrero in view of Chaudhuri further discloses that the visual representation of the tree data structure displays the descendant nodes on the traversed path from the root node to the selected descendant node and conceals or removes non relevant or siblings of the descendant nodes on the traversed path (column 3, lines 48-column 4, lines 29, column 8, lines 5-52, Figs. 6A-E).

With regard to claim 30:

Guerrero in view of Chaudhuri further discloses that the descendant nodes on the traversed path are selectable to display child nodes of the selected node (Figs. 6A-E, column 8, lines 12-21, 53-63).

With regard to claim 31:

Guerrero in view of Chaudhuri further discloses that the descendant nodes on the traversed path are selectable to display sibling nodes of the selected node (Figs. 6A-E, column 8, lines 12-21, 53-63).

With regard to claim 32:

Guerrero in view of Chaudhuri further discloses that the index comprises a visual representation of data (Figs. 6A-E).

With regard to claim 33:

Guerrero in view of Chaudhuri further discloses that the data nodes represent non-homogeneous classifiers (e.g. different information groups, Fig.4) and the index

(e.g. as shown in Fig. 4, all 114-116 are all document type), which represents a homogeneous attribute (all leaf nodes 114-116 are documents).

With regard to claim 34:

Guerrero in view of Chaudhuri further discloses that the data is organized according to one or more document type attributes (Fig. 4).

With regard to claim 37:

Guerrero in view of Chaudhuri further discloses that the root node (/) and descendent nodes (*Pipeplus, Pmail, Resource, and rquotes.r*) are stacked in hierarchy level order (e.g. Fig. 6D).

With regard to claim 38:

Guerrero discloses a combination tree data structure (Figs. 6A-E) and index (the leaf nodes) capable of electronic visual display of information organized by hierarchy levels (Figs. 6A-E).

Guerrero further discloses a tree data structure having one or more nodes associated with each hierarchy level (Figs. 6A-E).

Guerrero further discloses an index of selected information (e.g. Resource of Fig. 6B) associated with a selected one of the nodes (e.g. Pmail of Fig. 6B), the index having a plurality of indices (that is selecting *Resource* index results in displaying a plurality of indices, such as r*escom, rquotes.r, winpmdde*, etc of Fig. 6C), each indices capable of displaying predetermined parts of the selected information (e.g. selecting rquotes.r, as shown in Fig. 6C, may display data associated with the index).

Guerrero further discloses that the siblings of the selected node and the siblings of the ancestors of the selected node are not displayed (column 3, lines 48-column 4, lines 29, column 8, lines 5-52, Figs. 6A-E).

But Guerrero does not clearly describe a database hierarchy representations wherein *multiple siblings nodes represent database classifiers of database objects and a plurality siblings nodes in the hierarchy levels represent the same database classifier representing the same database object* as claimed in claim 28.

However, Chaudhuri discloses method and apparatus for the construction of a classification model from data in a large database. Chaudhuri is concerned in building classification models (also called classifiers) from a large database having records stored on a mass storage device (database system) (Abstract, column 1, lines 7-9). As illustrated in Fig. 3B, for example, a decision tree classifiers are disclosed, wherein the root node 112 of FIG. 3B splits between the three attribute values of 'Electronics', "Shoes', and 'Misc'. Each of the three sibling child nodes 113, 114, 115 are sub-nodes, representing database classifiers of database objects in the hierarchy levels (Fig. 3B, Abstract, column 7, lines 14-35, column 10, lines 44-63).

Chaudhuri and Guerrero are analogous art because they are from the same field of endeavor, organizing and representing information in a hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a display of relational database tree structures as illustrated in Fig. 3B of Chaudhuri in place of hierarchical file system display of Guerrero because Guerrero suggests that his invention can be used to display any type of hierarchical

information (Guerrero, col. 6, lines 38-46). Furthermore classifier (i.e., database classifier) is an effective means to visualize data as suggested by Chaudhuri, col 3, lines 32-35).

Therefore, it would have been obvious to combine Chaudhuri with Guerrero to obtain the invention as specified in claim 38.

With regard to claim 39:

Guerrero in view of Chaudhuri further discloses that only the relevant nodes are displayed in the path list, the siblings of the selected node and the siblings of the ancestors of the selected node which are not relevant are removed or are not displayed (column 3, lines 48-column 4, lines 29, column 8, lines 5-52, Figs. 6A-E).

With regard to claim 41:

Guerrero in view of Chaudhuri further discloses that the hierarchy levels correspond to different category of information (non-homogeneous classifiers) of the information (column 1, lines 28-42).

With regard to claim 42:

Guerrero further discloses that the indices correspond to one or more homogeneous attributes of the information (e.g. as shown in Fig. 4, all 114-116 are all document type), which represents a homogeneous attribute (all leaf nodes 114-116 are documents).

With regard to claim 43:

Guerrero discloses a method (Figs. 7A-B) of electronically displaying information.

The method includes among other things displaying a tree structure having a plurality of nodes (column 6, lines 52-63).

The method also includes selecting a node (column 7, lines 35-44, Figs. 6A-E).

The method also includes displaying an index associated with the selected node, the index having a plurality of indices (that is, selecting *Resource* index results in displaying a plurality of indices, such as r*escom, rquotes.r, winpmdde*, etc of Fig. 6C),

Guerrero further discloses displaying the tree structure with only the selected node and the direct ancestors of the selected node (column 3, lines 48-column 4, lines 29, column 8, lines 5-52, Figs. 6A-E).

But Guerrero does not clearly describe a database hierarchy representations wherein *multiple siblings nodes represent database classifiers of database objects and a plurality siblings nodes in the hierarchy levels represent the same database classifier representing the same database object* as claimed in claim 43.

However, Chaudhuri discloses method and apparatus for the construction of a classification model from data in a large database. Chaudhuri is concerned in building classification models (also called classifiers) from a large database having records stored on a mass storage device (database system) (Abstract, column 1, lines 7-9). As illustrated in Fig. 3B, for example, a decision tree classifiers are disclosed, wherein the root node 112 of FIG. 3B splits between the three attribute values of 'Electronics', "Shoes', and 'Misc'. Each of the three sibling child nodes 113, 114, 115 are sub-nodes, representing database classifiers of database objects in the hierarchy levels (Fig. 3B, Abstract, column 7, lines 14-35, column 10, lines 44-63).

Chaudhuri and Guerrero are analogous art because they are from the same field of endeavor, organizing and representing information in a hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a display of relational database tree structures as illustrated in Fig. 3B of Chaudhuri in place of hierarchical file system display of Guerrero because Guerrero suggests that his invention can be used to display any type of hierarchical information (Guerrero, col. 6, lines 38-46). Furthermore classifier (i.e., database classifier) is an effective means to visualize data as suggested by Chaudhuri, col 3, lines 32-35).

Therefore, it would have been obvious to combine Chaudhuri with Guerrero to obtain the invention as specified in claim 43.

With regard to claim 44:

As illustrated in path list 504 (Figs. 6A-E), Guerrero in view of Chaudhuri further discloses that only the selected path nodes and the direct ancestors of the selected node are shown or display (column 8, lines 53-63).

With regard to claim 45:

As illustrated in Figs. 6A-E, Guerrero in view of Chaudhuri further discloses that the navigational bars (610A-F) are placed one bar on top of the other bar as a stacked box metaphor.

With regard to claim 47:

Guerrero in view of Chaudhuri further discloses that the vertical browser display a file system **102** that allows a user to categorize or group files. As illustrated in **Figs.**

6A-F, a representation of hierarchical file structure is grouped vertically into several different (non-homogeneous) directories and the directories includes uniform (homogeneous) child documents or leaf nodes (index) (column 6, lines 27-46).

7. Claims 5, 8-10, 15, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guerrero (US Pat No 6,236,400) in view of Chaudhuri et al (US Pat No 6,212,526) further in view of Chittu et al (US Pub No 2002/0107892).

With regard to claim 5:

While Guerrero in view of Chaudhuri discloses Object-oriented programming languages including C++, Objective C and the Java TM (column 11, lines 1-5), but Guerrero in view of Chaudhuri does not disclose that the user interface or the vertical browser 502 is implemented with one of Win32, JavaSwing or DHTML. On the other hand, Chittu discloses DHTML controls that are rendered on the screen using CSS layers in combination with HTML < DIV> tags (see paragraph [0081]).

Chittu, Guerrero and Chaudhuri are analogous art because they are from the same field of endeavor that is manipulating hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the dynamic HTML (DHTML) controls as specified by Chittu with the object-oriented programming language of Guerrero in view of Chaudhuri.

The motivation/suggestion for doing so would have been to provide the Internet application (vertical browser) its own unique look and feel. This enables a software vendor to standardize the look and feel of all of the controls in its applications products.

DHTML provides the ability to define a standard look and feel on an Internet platform (Chittu, paragraph [0079]).

Therefore, it would have been obvious to combine Guerrero in view of Chaudhuri with Janes to obtain the invention of claim 5.

With regard to claim 8:

Guerrero in view of Chaudhuri discloses a navigational bar (Figs. 6A-E). Guerrero in view of Chaudhuri also discloses that the navigation bar is selectable as illustrated via a position indicator, or marquee 622 (e.g., a dotted line marquee, is used to indicate the current position of the "cursor". But Guerrero in view of Chaudhuri does not show that an activation icon operable to display the hierarchy level associated with the sub-node of the navigation bar.

Chittu, on the other hand discloses a dynamic tree control system. The dynamic tree control system includes among other things, one or more tree node layers. Each tree node layer in turn can contain a collapser layer 46 (activation icon), a node icon layer, and a caption on label layer (Chittu, Fig. 3). The collapser layer 46 when activated displays the hierarchy level associated with the sub-node of the navigation bar (see paragraphs [0087]).

Chittu, Guerrero and Chaudhuri are analogous art because they are from the same field of endeavor that is manipulating hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the collapser layer (activation icon) of Chittu with path list 504 of the hierarchy tree as specified by Guerrero in view of Chaudhuri.

The motivation/suggestion for doing so would have been to save space during display of hierarchical application. That is, since hierarchical nodes are represented with a collapser layer (+/-), and since unselected intermediate node (siblings) are not displayed, the hierarchical application can be displayed in a minimum display area (Chittu, [0003]).

Therefore, it would have been obvious to combine Guerrero in view of Chaudhuri with Chittu to obtain the invention of claim 8.

With regard to claim 9:

Guerrero in view of Chaudhuri further in view of Chittu discloses that the collapser layer (+/-) 46 (activation icon) (Fig. 3) is further operable to display sub-nodes of the activated icon. The collapser layer has a collapsing and expanding (+/-) function, wherein when a higher node is expanded associated lower nodes or sub-nodes will be shown (see Chittu, paragraph [0027], [0087]).

With regard to claim 10:

Guerrero in view of Chaudhuri further in view of Chittu discloses that the activation icon is further operable to hide sibling nodes of the activated icon (see Chittu, paragraph [0027], [0087]).

With regard to claim 15:

Guerrero in view of Chaudhuri further discloses that activation of the second hierarchy label displays the third hierarchy level having multiple third hierarchy labels (Figs. 6A-E). For example, activating Pipeplus (2nd hierarchical level after the root node) will display Pmail (the 3rd hierarchical level).

Guerrero in view of Chaudhuri discloses removing the multiple third hierarchy level and displaying the multiple second hierarchy labels. For example, selecting a second navigational bar which is *Pipeplus* displays the sub nodes of *Pipeplus*, which are Download, Etc, Eudora, Ewan, etc, Fig. 6A. The third navigational bar is Pmail (Fig.6B), selecting the second navigational bar (Pipeplus) while the third navigational bar (Pmail) is displayed will remove the third navigational bar (column 7, lines 10-44, column 7, lines 66-column 8, lines 11, column 8, lines 43-63).

But Guerrero in view of Chaudhuri does not show expressly displaying an activation icon associated with the first hierarchy label.

Chittu, On the other hand discloses a collapser layer 46, wherein the collapser collapses a selected level such as a third hierarchy level and expands or displays a selected level such as a second hierarchy level (see Chittu, Fig. 3, and paragraphs [0027], [0086] through [0091]).

Chittu, Guerrero and Chaudhuri are analogous art because they are from the same field of endeavor that is manipulating hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the collapser layer (activation icon) of Chittu with path list 504 of the hierarchy tree as specified by Guerrero in view of Chaudhuri.

The motivation/suggestion for doing so would have been to save space during display of hierarchical application. That is, since hierarchical nodes are represented with a collapser layer (+/-), and since unselected intermediate node (siblings) are not

displayed, the hierarchical application can be displayed in a minimum display area (Chittu, [0003]).

Therefore, it would have been obvious to combine Guerrero in view of Chaudhuri with Chittu to obtain the invention of claim 15.

With regard to claim 46:

Guerrero in view of Chaudhuri further in view of Chittu further discloses collapsing a node of the stacked box metaphor (Chittu, paragraph [0087]). Guerrero in view of Chaudhuri further in view of Chittu further discloses displaying the tree structure with the collapsed node, the children of the collapsed node and the direct ancestors of the collapsed node (Chittu, Figs. 2, 7A-H, paragraphs [0027, [0087] through [0091],

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guerrero (US Pat No 6,236,400) in view of Chaudhuri et al (US Pat No 6,212,526) further in view of Lindberg et al (US Pat No 6,732,109).

With regard to claim 7:

While Guerrero in view of Chaudhuri discloses a browser that is populated using HTML data structure, but Guerrero in view of Chaudhuri does not disclose that the browser is populated using XML data structure.

Lindberg, on the other hand, discloses a user interface that preferably includes a browser located on a computer, and is displayed as a plurality of web pages generated from a plurality of entities in a mark up language (such as HTML or XML) (column 4, lines 64-column 5, lines 9).

Lindberg, Guerrero and Chaudhuri are analogous art because they are from the same field of endeavor that is manipulating hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to replace the HTML of Guerrero in view of Chaudhuri with XML of Lindberg because as specified by Lindberg any one of the markup languages can be incorporated to the browser. Furthermore, as will be appreciated by those skilled in the art, XML is a meta-markup language that provides a format better than HTML for describing structured data.

Therefore, it would have been obvious to combine Guerrero in view of Chaudhuri with Lindberg to obtain the invention of claim 7.

9. Claims 3, 12-14, 20-21, 35-36, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guerrero (US Pat No 6,236,400) in view of Chaudhuri et al (US Pat No 6,212,526) further in view of Janes et al (US Pat No 6,642,946).

With regard to claim 3:

Guerrero in view of Chaudhuri discloses that the vertical browser display a file system Fig.1, 102 that allows a user to categorize or group files. As illustrated in Figs. 6A-F, a representation of hierarchical file structure is grouped vertically into several different (non-homogeneous) directories or hierarchy levels (such as *Root node (/) to Pipeplus, Pmail, and Resource*) and the directories or hierarchy levels includes uniform (homogeneous) attributes, that is selectable child documents or leaf nodes (index) (column 6, lines 27-46, Fig. 6C, 506).

But Guerrero in view of Chaudhuri fails to display one or more tabs associated with the one or more attributes or choices 506, Fig. 6C of the information.

Janes discloses tabs associated with one or more nodes or attributes (see Figs. 4A and 4B).

Jones, Guerrero and Chaudhuri are analogous art because they are from the same field of endeavor that is manipulating hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the designated selectable bar icons of Guerrero in view of Chaudhuri with multiple index tabs because the tabbed index pages provide data summaries and details of the tree node selected by the user. Furthermore, the user is able to easily navigate through the data and obtain snap shots of the data presented in meaningful ways (see Janes, column 14, lines 3-10).

Therefore, it would have been obvious to combine Guerrero in view of Chaudhuri with Janes to obtain the invention of claim 3.

With regard to claim 12:

As illustrated in Figs. 6A-6E, Guerrero in view of Chaudhuri discloses a user interface 502 displaying hierarchical file system information, wherein activation of any one of the choices list 506 (second hierarchy) displays the information associated with the activated label (column 2, lines 3-10), also as illustrated in Fig. 6C, the information indexed (610A-E) according to one or more attributes (type of document) (column 8, lines 21-52, column 9, lines 12-23).

While Guerrero in view of Chaudhuri discloses displaying, and activating a node designated by selectable bar icon in the hierarchy, but Guerrero in view of Chaudhuri does not disclose multiple index tabs associated with one or more of the attributes. Janes, on the other hand, discloses multiple tabs associated with one or more nodes or attribute of a node (see Figs. 4A and 4B).

Jones, Guerrero and Chaudhuri are analogous art because they are from the same field of endeavor that is manipulating hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the designated selectable bar icons of Guerrero in view of Chaudhuri with multiple index tabs because the tabbed index pages provide data summaries and details of the tree node selected by the user. Furthermore, the user is able to easily navigate through the data and obtain snap shots of the data presented in meaningful ways (see Janes, column 14, lines 3-10).

Therefore, it would have been obvious to combine Guerrero in view of Chaudhuri with Janes to obtain the invention of claim 12.

With regard to claim 13:

As shown in Figs. 6A-E, Guerrero in view of Chaudhuri further in view of Janes further discloses that the one or more of the displayed hierarchy levels are stacked as navigation bars from a root level to a lowest hierarchy level (see Guerrero, path list 504, Figs. 6A-E).

With regard to claim 14:

Again, as illustrated in Figs. 6A-E, Guerrero in view of Chaudhuri further in view of Janes further discloses that the displayed information is stacked below the lowest hierarchy level. For example, as shown in Fig. 6C, the lowest hierarchy level is *Resource* (608D), and information (610A-E) is stacked below the lowest hierarchy level (see Guerrero, column 8, lines 21-33).

With regard to claim 20:

Guerrero in view of Chaudhuri further in view of Janes discloses information is further indexed by an attribute (see Janes, Figs. 2F-J, 4A-B, 10A-B) the user interface further having multiple index tabs associated with the information and operable to display information having the attribute (see Janes, Figs. 2F-J, 4A-B, 10A-B).

With regard to claim 21:

Guerrero in view of Chaudhuri further in view of Janes discloses the user interface (browser **502**) further having a scroll bar **624** associated with the information and operable to scroll through the information without affecting the presentation of the stacked nodes (see Guerrero, Figs. 6A-E).

With regard to claim 35:

Guerrero in view of Chaudhuri further in view of Janes discloses that the data is represented by tabs associated with the one or more attributes (see Janes, Figs. 2F-J, 4A-B, 10A-B).

With regard to claim 36:

Guerrero in view of Chaudhuri further in view of Janes further discloses that the selection of a tab displays data associated with the tab and conceals other data associated with the selected descendant node (see Janes, Figs. 2F-J, 4A-B, 10A-B).

With regard to claim 40:

Guerrero in view of Chaudhuri further in view of Janes discloses that indices are represented by a tab (see Janes, Figs. 2F-J, 4A-B, 10A-B).

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Guerrero (US Pat No 6,236,400) in view of Chaudhuri et al (US Pat No 6,212,526) further in view of Janes et al (US Pat No 6,642,946) as applied to claim 12 above, and further in view of Chittu et al (US Pub No 2002/0107892).

Guerrero in view of Chaudhuri further in view of Janes discloses a navigational bar (Guerrero, Figs. 6A-E). Guerrero in view of Janes also discloses that the navigation bar is selectable as illustrated via position indicator, or marquee 622 (e.g., a dotted line marquee, is used to indicate the current position of the "cursor". Guerrero in view of Chaudhuri further in view of Janes further discloses removing the multiple third hierarchy level and displaying the multiple second hierarchy labels. For example, selecting a second navigational bar which is *Pipeplus* displays the sub nodes of *Pipeplus*, which are *Download, Etc, Eudora, Ewan*, etc, Fig. 6A). The third navigational bar is Pmail, selecting the second navigational bar (Pipeplus) while the third navigational bar (Pmail) is displayed will remove the third navigational bar (Guerrero, column 7, lines 10-44, column 7, lines 66-column 8, lines 11, column 8, lines 43-63).

But Guerrero in view of Chaudhuri further in view of Janes does not show expressly displaying, and activating an activation icon.

Chittu, on the other hand discloses a dynamic tree control system. The dynamic tree control system includes among other things, one or more tree node layers. Each tree node layer in turn can contain a collapser layer 46 (activation icon), a node icon layer, and a caption on label layer (Chittu, Fig. 3). The collapser layer 46 when activated displays the hierarchy level associated with the sub-node of the navigation bar (see paragraphs [0087]).

Chittu, Guerrero, Janes and Chaudhuri are analogous art because they are from the same field of endeavor that is manipulating hierarchical tree structure.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the collapser layer (activation icon) of Chittu with path list 504 of the hierarchy tree as specified by Guerrero in view of Chaudhuri further in view of Janes.

The motivation/suggestion for doing so would have been to save space during display of hierarchical application. That is, since hierarchical nodes are represented with a collapser layer (+/-), and since unselected intermediate node (siblings) are not displayed, the hierarchical application can be displayed in a minimum display area (Chittu, [0003]).

Therefore, it would have been obvious to combine Guerrero and Janes with Chittu to obtain the invention of claim 16.

Response to Arguments

11. Applicant's arguments with respect to claims 1, 11, 18, 22, 28, 38, 43 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Tadesse Hailu, whose telephone number is (703) 306-2799. The Examiner can normally be reached on M-F from 10:00 - 6:30 ET. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, John Cabeca, can be reached at (703) 308-3116 Art Unit 2173 CPK 2-4A51.

14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Tadesse Hailu
4/13/05